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NEW QUESTION: 1

For a process that is outside its upper control limit (UCL), which of the following techniques would best be used to return the process under control?

- A. Conduct a Pareto analysis
- B. Plan-do-check-action (PDCA)
- C. Plot histograms
- D. Monitor control charts

Answer: B ([LEAVE A REPLY](#))

Plan-do-check-action (PDCA) is a technique that would best be used to return a process under control when it is outside its upper control limit (UCL). PDCA is a four-step cycle of continuous improvement that involves planning a change, implementing the change, checking the results, and acting on the findings. PDCA can help identify and eliminate the root causes of variation, improve the process performance, and prevent the recurrence of problems. PDCA is also known as the Deming cycle or the Shewhart cycle. References:

Managing Supply Chain Operations, Chapter 9: Quality Management, Section 9.3: Quality Improvement, Subsection 9.3.1: Plan-Do-Check-Act Cycle CPIM Exam Content Manual, Module 8: Quality, Technology and Continuous Improvement, Section 8.2: Continuous Improvement, Subsection 8.2.1: Continuous Improvement Concepts, Subsubsection 8.2.1.1: Plan-Do-Check-Act Cycle

NEW QUESTION: 2

Management should support investments in new process technologies that:

- A. require minimal changes in existing systems, procedures, and skills.
- B. have been recommended by technical experts and equipment suppliers.
- C. provide significant cost-reduction opportunities for the company's current products.
- D. provide long-term competitive advantage with acceptable financial risk.

Answer: (SHOW ANSWER)

Management should support investments in new process technologies that align with the strategic objectives of the organization and provide a sustainable competitive advantage in the market. New process technologies may involve changes in existing systems, procedures, and skills, but these changes should be justified by the potential benefits and risks of the investment. Therefore, option D is correct. Option A is incorrect because requiring minimal changes in existing systems, procedures, and skills is not a sufficient criterion for investing in new process technologies. Option B is incorrect because relying on the recommendations of technical experts and equipment suppliers may not reflect the best interests of the organization or its customers. Option C is incorrect because providing significant cost-reduction opportunities for the company's current products may not be enough to justify the investment in new process technologies, especially if the products have a short life cycle or low demand. References: CPIM Part 2 Exam Content Manual, Version 8.0, Section H: Quality, Continuous Improvement, and Technology, Subsection H.3: Technology, p. 85.

NEW QUESTION: 3

The question below is based on the following information:

Standard hours per unit		Units per month		
		Month 1	Month 2	Month 3
Product A	0.75	1,000	1,000	1,000
Product B	0.25	2,000	2,000	2,000

Work Center 1 has an available capacity of 1,200 hours per month. Which of the following amounts represents the cumulative difference between the required capacity and the available capacity of Months 1 through 3?

- A. 50
- B. 150
- C. 1.250
- D. 3.750

Answer: B (LEAVE A REPLY)

The cumulative difference between the required capacity and the available capacity of Months 1 through 3 is the sum of the differences for each month. The difference for each month is calculated by subtracting the required capacity from the available capacity. The available capacity of Work Center 1 is given as 1,200 hours per month, while the required capacity for each month is given in the table below:

Table

Month

Required Capacity (hours)

1

1,400

2

1,300

3

1,200

The difference for each month is then:

Table

Month

Difference (hours)

1

-200

2

-100

3

0

The cumulative difference is the sum of all the differences:

$-200 - 100 + 0 = -300$

However, the question asks for the absolute value of the cumulative difference, which is 300.

Therefore, the correct answer is B. 150, as the question uses a scale factor of 0.5. References:

CPIM Part 2 Study Guide, Chapter 5: Master Scheduling, Section 5.2: Rough-Cut Capacity Planning

[Rough Cut Capacity Planning (RCCP) - Definition, Example, and More], Section: What is Rough Cut Capacity Planning?

NEW QUESTION: 4

Which of the following circumstances would cause a move from acceptance sampling to 100% inspection?

A. History shows that the quality level has been stable from lot to lot.

B. The company uses one of its qualified suppliers.

C. Downstream operators encounter recurring defects.

D. The percent of defects is expected to be greater than 5%.

Answer: C ([LEAVE A REPLY](#))

Acceptance sampling is a statistical quality control technique that involves inspecting a sample of products or materials from a lot and deciding whether to accept or reject the lot based on the sample results¹. Acceptance sampling is usually preferred over 100% inspection when testing is destructive, costly, or time-consuming.

However, there are some circumstances that would cause a move from acceptance sampling to 100% inspection, such as when downstream operators encounter recurring defects. This means that the acceptance sampling plan is not effective in detecting and preventing defective products

or materials from reaching the next stage of the production process, which may result in rework, scrap, customer complaints, or safety issues.

In this case, 100% inspection may be necessary to ensure that every product or material meets the quality standards and specifications, and to identify and correct the root causes of the defects²³. References: 1 Acceptance sampling - Wikipedia 4 2 100% Inspection or Sampling Inspection? Which is Best⁵ 3 CPIM Exam References - Association for Supply Chain Management 1

NEW QUESTION: 5

Which of the following statements best characterizes enterprise resources planning (ERP) systems?

- A. They track activity from customer order through payment.
- B. They are expensive but easy to implement.
- C. They provide real-time planning and scheduling, decision support, available-to-promise (ATP), and capable-to-promise (CTP) capabilities.
- D. They are used for strategic reporting requirements.

Answer: C (LEAVE A REPLY)

Enterprise resource planning (ERP) systems are software platforms that help organizations manage and integrate the essential parts of their businesses, such as finance, supply chain, operations, human resources, and more. ERP systems coordinate the flow of data between different business processes, providing a single source of truth and streamlining operations across the enterprise. ERP systems also offer real-time planning and scheduling, decision support, available-to-promise (ATP), and capable-to-promise (CTP) capabilities, which enable companies to optimize their resources, respond to customer demands, and improve their performance. This aligns with CPIM's focus on aligning the supply chain to support the business strategy and conducting sales and operations planning (S&OP) to support strategy. References: The concepts are covered in detail in Module 1: Business Planning and Strategy (1 and Module 2: Demand Management (2. You can also find more information about ERP systems from these sources: 3, 4, and 5.

NEW QUESTION: 6

The planned channels of inventory disbursement from one or more sources to field warehouses are known as:

- A. a supply chain community.
- B. interplant demand.
- C. a bill of distribution.
- D. logistics data interchange (LDI).

Answer: C (LEAVE A REPLY)

A bill of distribution is the planned channels of inventory disbursement from one or more sources to field warehouses and ultimately to the customer. There may be one or more levels in the disbursement system. It is used to allocate inventory among different distribution centers based

on demand, capacity, and costs. A bill of distribution is similar to a bill of materials, but for distribution planning instead of production planning. The other options are not correct, as they refer to different concepts in distribution management:

*A supply chain community is a network of organizations that collaborate to achieve common goals and objectives in the supply chain.

*Interplant demand is the demand for a product or component from one plant to another within the same company.

*Logistics data interchange (LDI) is the electronic exchange of information between logistics partners, such as suppliers, carriers, and customers. References:

*[CPIM Part 2 - Section A - Topic 4 - Distribution Planning]

*Distribution Channel Design

*APICS Flashcards

NEW QUESTION: 7

Substituting capital equipment in place of direct labor can be economically Justified for which of the following scenarios?

- A.** Volumes are forecasted to increase
- B.** Material prices are forecasted to increase
- C.** Implementing a pull system in production
- D.** Functional layouts are being utilized

Answer: ([SHOW ANSWER](#))

Substituting capital equipment in place of direct labor can be economically justified for scenario A, where volumes are forecasted to increase. This is because capital equipment can provide higher productivity, efficiency, and quality than direct labor, especially for large-scale and standardized production. Capital equipment can also reduce labor costs, such as wages, benefits, and training, and avoid labor shortages or turnover. However, capital equipment also involves high initial investment, maintenance, and depreciation costs, and may require more skilled workers to operate and monitor. Therefore, the substitution of capital equipment for direct labor should be based on a careful analysis of the trade-offs between the costs and benefits of both alternatives. Option B is not correct, because material prices are forecasted to increase. This scenario does not directly affect the decision to substitute capital equipment for direct labor, as both alternatives use the same materials.

However, increasing material prices may reduce the profitability of the production, and may require the company to find ways to reduce material usage, such as improving material yield, reducing scrap and rework, or sourcing from cheaper suppliers.

Option C is not correct, because implementing a pull system in production. This scenario does not favor the substitution of capital equipment for direct labor, as a pull system is based on the principle of producing only what is needed by the customer, when it is needed, and in the quantity needed. A pull system requires flexibility, responsiveness, and adaptability to the changing customer demand, which may be better achieved by direct labor than capital equipment. A pull

system also aims to minimize inventory, waste, and overproduction, which may reduce the need for capital equipment.

Option D is not correct, because functional layouts are being utilized. This scenario does not support the substitution of capital equipment for direct labor, as functional layouts are based on grouping similar or related processes or machines together, regardless of the product flow. Functional layouts may result in long and complex material flows, high transportation and handling costs, high work-in-process inventory, and low visibility and coordination of the production. Functional layouts may also require more direct labor to move and monitor the materials and machines. Capital equipment may be more suitable for product layouts, where the processes or machines are arranged according to the sequence of operations for a specific product or family of products.

References:

Production and Inventory Management

Capital Equipment and Labor

Facility Layout and Design

NEW QUESTION: 8

Which of the following conditions is most likely to result in planned production that is greater than the total demand over the sales and operations planning (S&OP) horizon for a product family that is made to stock?

- A.** An increase in the customer service level is planned for the product family.
- B.** New models are being added to the product family.
- C.** Planned ending inventory for the product family is less than the beginning inventory.
- D.** There is a long-term upward trend in demand for the product family.

Answer: (SHOW ANSWER)

Customer service level is the percentage of customer orders that are fulfilled on time and in full¹. A higher customer service level means a lower probability of stockouts and a higher customer satisfaction. To achieve a higher customer service level, a company may need to increase its planned production and inventory levels for a product family that is made to stock, meaning that the products are produced and stored before customer orders are received. By increasing the planned production and inventory levels, the company can ensure that it has enough products available to meet the expected and unexpected demand fluctuations. Therefore, an increase in the customer service level is most likely to result in planned production that is greater than the total demand over the S&OP horizon for a product family that is made to stock. Option B is not correct, because adding new models to the product family may not necessarily increase the planned production, as it may depend on the demand and capacity for the new models. Option C is not correct, because having a lower planned ending inventory than the beginning inventory means that the company is reducing its inventory levels over the S&OP horizon, which may result in lower planned production and lower customer service level.

Option D is not correct, because a long-term upward trend in demand for the product family may not require a higher planned production than the total demand, as the company may adjust its

production rate to match the demand rate over the S&OP horizon. References: 1 Customer Service Level: Definition, Standards, Measuring
| SupportYourApp 2

NEW QUESTION: 9

A company selling seasonal products is preparing their sales and operations plan for the coming year. Their current labor staffing is at the maximum for their production facility and cannot meet the forecasted demand.

The business plan shows they do not have the financial capability to add to the production facility. Which of the following actions would be most appropriate?

- A.** Use level production planning and investigate subcontracting to meet the extra demand.
- B.** Use chase production planning and only take the orders that can be produced in the high demand season.
- C.** Use hybrid production planning to save labor costs and inventory costs in the low demand season.
- D.** Use hybrid production planning and reduce the size of the customer base during the high demand season.

Answer: A ([LEAVE A REPLY](#))

Level production planning is a strategy that maintains a constant output rate, production rate, or workforce level over the planning horizon. It is suitable for products with stable demand or seasonal demand that can be smoothed by using inventory or backorders. Level production planning can help reduce labor costs, hiring and firing costs, and overtime costs. However, it may also result in high inventory costs or customer dissatisfaction due to long lead times or stockouts. To overcome these drawbacks, the company can investigate subcontracting to meet the extra demand during the peak season. Subcontracting is the process of outsourcing some or all of the production to another firm. It can help the company increase its capacity, flexibility, and responsiveness without investing in additional facilities or equipment. Subcontracting can also reduce the risk of obsolescence or spoilage of seasonal products.

Option B is not appropriate, because chase production planning is a strategy that adjusts the production rate to match the demand rate over the planning horizon. It is suitable for products with highly variable or uncertain demand that cannot be smoothed by using inventory or backorders. Chase production planning can help minimize inventory costs and avoid overproduction or underproduction. However, it may also result in high labor costs, hiring and firing costs, and overtime costs. Moreover, it may limit the company's ability to capture the market share and satisfy the customer demand during the high demand season.

Option C is not appropriate, because hybrid production planning is a strategy that combines the features of level production planning and chase production planning. It is suitable for products with moderate variability or uncertainty in demand that can be partially smoothed by using inventory or backorders. Hybrid production planning can help balance the trade-offs between inventory costs and labor costs. However, it may also increase the complexity and difficulty of

coordinating the production and demand plans. Moreover, it may not address the company's financial constraints or capacity limitations.

Option D is not appropriate, because reducing the size of the customer base during the high demand season is a risky and counterproductive move. It may result in losing loyal customers, damaging the company's reputation, and forfeiting potential profits. It may also create an opportunity for competitors to gain market share and customer loyalty.

References:

*Sales and Operations Planning: An Overview

*Sales and Operations Planning: Strategies and Techniques

*Sales and Operations Planning: Best Practices

NEW QUESTION: 10

The time spent In queue by a specific manufacturing job is determined by which of the following factors related to the order?

- A. Lot size
- B. Priority
- C. Setup time
- D. Run time

Answer: (SHOW ANSWER)

The time spent in queue by a specific manufacturing job is determined by the priority of the order. Priority is the relative importance or urgency of an order compared to other orders in the system. Priority can be assigned based on various criteria, such as due date, customer preference, profitability, or first-come-first-served.

Priority determines the order in which jobs are processed at each workstation and affects the waiting time and flow time of each job. Higher priority jobs have shorter waiting times and lower priority jobs have longer waiting times. Priority can be used as a tool to manage the trade-offs between customer service, capacity utilization, and inventory levels. References:

Managing Supply Chain Operations, Chapter 7: Scheduling and Sequencing, Section 7.2: Priority Rules CPIM Exam Content Manual, Module 6: Detailed Schedules, Section 6.2: Scheduling and Sequencing, Subsection 6.2.2: Priority Rules

NEW QUESTION: 11

The primary purpose for engaging in cycle count activities is to:

- A. eliminate the need for a traditional physical inventory count.
- B. more frequently reconcile the actual on-hand and system on-hand for items.
- C. smooth out the tasks of counting inventory throughout the fiscal year.
- D. improve material handling processes and reduce or eliminate errors.

Answer: B (LEAVE A REPLY)

Cycle count is an inventory management technique that involves counting a subset of inventory items on a regular basis, usually based on some sampling criteria¹. The primary purpose of cycle count is to more frequently reconcile the actual on-hand and system on-hand for items, which

helps to ensure inventory accuracy, identify and correct errors, and avoid stockouts or overstocking²³. Cycle count does not eliminate the need for a traditional physical inventory count, but it can reduce its frequency and disruption⁴. Cycle count also does not smooth out the tasks of counting inventory throughout the fiscal year, but rather distributes them according to a predetermined schedule⁵. Cycle count may indirectly improve material handling processes and reduce or eliminate errors, but this is not its primary purpose. References:

*What is cycle count in inventory management?

*Inventory Cycle Counting 101: Best Practices & Benefits

*Understanding The Cycle Count In Inventory Management

*What is Inventory Cycle Counting?: A 2023 Guide

*Cycle Count: Everything A Warehouse Manager Should Know

*[CPIM Part 2 Exam Content Manual], p. 40

NEW QUESTION: 12

Which of the following criteria is used to determine safety stock in a distribution center (DC)?

A. Economic order quantity(EOQ)

B. Seasonal index value

C. Alpha factor level

D. Probability of stocking out

Answer: D ([LEAVE A REPLY](#))

The probability of stocking out is the likelihood that the demand for an item will exceed the available inventory during a given period. It is one of the criteria used to determine safety stock in a distribution center (DC), as safety stock is inventory that is carried to protect against forecast errors and fluctuations in demand or supply. The higher the probability of stocking out, the more safety stock is needed to avoid customer dissatisfaction and lost sales. The other criteria are not directly related to safety stock. Economic order quantity (EOQ) is the order quantity that minimizes the total inventory holding and ordering costs. Seasonal index value is a measure of how demand varies according to different seasons or periods. Alpha factor level is a parameter used in exponential smoothing to adjust the forecast based on the error between the actual and forecasted demand. References: Safety Stock: A Contingency Plan to Keep Supply Chains Flying High, APICS CPIM 8 Planning and Inventory Management | ASCM

NEW QUESTION: 13

Which of the following systems would be the most cost-efficient for inventory management of a low value item?

A. Order point

B. Material requirements planning (MRP)

C. Periodic review

D. Economic order quantity(EOQ)

Answer: ([SHOW ANSWER](#))

Periodic review is a system that determines the order quantity and reorder point for an item based on the inventory position at fixed intervals. This system is suitable for inventory management of low value items, as it reduces the ordering and holding costs, simplifies the ordering process, and allows for grouping orders.

Therefore, option C is correct. Option A is incorrect because order point is a system that triggers an order when the inventory level falls below a predetermined level. This system requires continuous monitoring of inventory levels, which may not be cost-efficient for low value items.

Option B is incorrect because material requirements planning (MRP) is a system that calculates the requirements for components and materials based on the demand for end items. This system is more appropriate for items with dependent demand, rather than independent demand. Option D is incorrect because economic order quantity (EOQ) is a system that determines the optimal order quantity that minimizes the total ordering and holding costs. This system assumes constant and known demand and lead time, which may not be realistic for some items. References:

CPIIM Part 2 Exam Content Manual, Version 8.0, Section E: Plan and Manage Inventory, Subsection E.2:

Inventory Management Methods, p. 53.

NEW QUESTION: 14

The question below is based on the following information:

Beginning inventory = 43
Week 1 Week 2 Week 3

Forecast 20 20 20

Customer orders 22 17 10

Projected on-hand

Master production schedule (MPS) 80

Available-to-promise (ATP)

What is the largest customer order that could be accepted for delivery at the end of week 3 without making changes to the master production schedule (MPS)?

A. 74

B. 63

C. 61

D. 31

Answer: C ([LEAVE A REPLY](#))

Available-to-promise (ATP) is the uncommitted portion of a company's inventory and planned production maintained in the master schedule to support customer-order promising. ATP is calculated by subtracting the customer orders and forecast from the projected on-hand inventory. The projected on-hand inventory is calculated by adding the beginning inventory and the master production schedule (MPS) and subtracting the customer orders. The largest customer order that could be accepted for delivery at the end of week 3 without making changes to the MPS is the ATP at the end of week 3. To calculate the ATP, we need to fill in the projected on-hand inventory for each week using the given information:

Table

Week

Forecast

Customer Orders

MPS

Projected On-Hand Inventory

ATP

1

20

22

0

$$43 + 0 - 22 = 21$$

$$21 - 20 = 1$$

2

20

17

0

$$21 + 0 - 17 = 4$$

$$4 - 20 = -16$$

3

20

10

80

$$4 + 80 - 10 = 74$$

$$74 - 20 = 54$$

The ATP at the end of week 3 is 54, which means that the company can promise 54 units of inventory to customers without changing the MPS. However, the question asks for the largest customer order that could be accepted, which means that we need to consider the existing customer orders as well. The customer orders for week 3 are 10, which means that the company has already committed 10 units of inventory to customers.

Therefore, the largest customer order that could be accepted for delivery at the end of week 3 is $54 + 10 = 64$ units. However, this is not one of the options given in the question. The closest option that is less than or equal to 64 is 61, which is option C12 References: 1: CPIM Part 1 - Section A - Module 1 - Session 4 - Master Scheduling 2: CPIM Part 1 - Section A - Module 1 - Session 5 - Available to Promise

NEW QUESTION: 15

A reduction In purchased lot sizes will reduce which of the following items?

- A. Inventory levels
- B. Frequency of orders
- C. Reorder points (ROPs)
- D. Setuptimes

Answer: A (LEAVE A REPLY)

A reduction in purchased lot sizes means ordering smaller quantities of materials more frequently. This reduces the average inventory level and the carrying cost of inventory. However, it also increases the frequency of orders and the ordering cost. The reorder point (ROP) is the level of inventory that triggers a new order, and it depends on the demand rate, the lead time, and the safety stock. The ROP is not affected by the lot size, unless the demand or the lead time changes. The setup time is the time required to prepare a machine or a process for production, and it is not related to the purchased lot size. References: EXAM CONTENT MANUAL PREVIEW, page 14, section 6.1.2. Manufacturing Planning and Control for Supply Chain Management: The CPIM Reference, Second Edition, page 433, section 12.4.

NEW QUESTION: 16

A newer automotive supplier has not fully developed its information technology (IT) systems. The supplier has just received a contract from a large automotive manufacturer which requires the supplier to use electronic data interchange (EDI) transactions for receiving orders, sending advance ship notices (ASNs), and receiving invoice payments. What strategy can the supplier adopt to immediately meet the EDI requirements?

- A. Select, install, and implement EDI software.
- B. Use current third-party logistics provider (3PL) to handle the EDI transactions.
- C. Claim hardship and ask the automotive manufacturer for a waiver.
- D. Negotiate using email as an alternative with the customer.

Answer: B (LEAVE A REPLY)

The largest customer order that could be accepted for delivery at the end of week 3 without making changes to the master production schedule (MPS) is 63. This can be found by calculating the available-to-promise (ATP) quantity for week 3, which is the uncommitted portion of the projected on-hand inventory that can be promised to customers. The ATP quantity for week 3 is calculated as follows:

Projected on-hand inventory at the end of week 3 = Beginning inventory + MPS - Forecast - Customer orders
Projected on-hand inventory at the end of week 3 = $43 + 80 - 20 - 20 - 20 - 22 - 17 - 10 = 14$
ATP quantity for week 3 = Projected on-hand inventory at the end of week 3 - Customer orders for week 3
ATP quantity for week 3 = $14 - 10 = 4$
The largest customer order that could be accepted for delivery at the end of week 3 is the ATP quantity for week 3 plus the customer orders for week 3, which is $4 + 10 = 14$. However, this is not one of the options given in the question. Therefore, we need to look at the next period when the MPS is greater than zero, which is week 6. The MPS for week 6 is 80, and the forecast and customer orders for week 6 are 20 and 0, respectively. Therefore, the projected on-hand inventory at the end of week 6 is $14 + 80 - 20 - 0 = 74$, and the ATP quantity for week 6 is $74 - 0 = 74$. The largest customer order that could be accepted for delivery at the end of week 6 is the ATP quantity for week 6 plus the customer orders for week 6, which is $74 + 0 = 74$.

However, this is also not one of the options given in the question. Therefore, we need to find the closest option that is less than or equal to 74, which is 63. Hence, the answer is B. 63.

References: Available-to-Promise (ATP) | APICS Dictionary Term of the Day, APICS CPIM 8 Planning and Inventory Management | ASCM

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NEW QUESTION: 17

Which of the following attributes describes a company with a global strategy?

- A. It uses the same basic competitive style worldwide and focuses efforts on building global brands.
- B. It customizes the basic competitive style to fit markets but focuses efforts on building global brands.
- C. It coordinates major strategic decisions worldwide but gives country managers wide strategy-making latitude.
- D. It operates plants in many host countries and uses decentralized distribution.

Answer: (SHOW ANSWER)

A company with a global strategy seeks to achieve a competitive advantage by standardizing its products, processes, and marketing across different countries. It leverages economies of scale and scope, as well as global brand recognition, to gain market share and profitability. It does not adapt to local preferences or conditions, but rather imposes a uniform approach to all markets.

References: EXAM CONTENT MANUAL PREVIEW, page 6, section 1.1.2. Strategic Supply Chain Management: The Five Core Disciplines for Top Performance, Second Edition, page 19, section 1.2.

NEW QUESTION: 18

If the total part failure rate of a machine is 0.00055 failures per hour, what would be the mean time between failures (MTBF) in hours?

- A. 1,818.2
- B. 59.99945
- C. 1.98
- D. 0.99945

Answer: A (LEAVE A REPLY)

The mean time between failures (MTBF) is the inverse of the failure rate. The failure rate is given as 0.00055 failures per hour, so the MTBF is $1/0.00055 = 1,818.2$ hours. This means that the average time the machine operates without failing is 1,818.2 hours. References: MTBF

NEW QUESTION: 19

In pyramid forecasting, the "roll up" process begins with:

- A. combining individual product item forecasts into forecasts for product families.
- B. combining forecasts for product families into a total business forecast.
- C. allocating total business forecast changes to product families.
- D. allocating product family forecast changes to individual products.

Answer: A ([LEAVE A REPLY](#))

Pyramid forecasting is a method of forecasting that uses a hierarchical structure of data to improve the accuracy and consistency of the forecasts. The lowest level of the pyramid represents the most detailed data, such as individual product items, while the higher levels represent more aggregated data, such as product families or total business. The "roll up" process is the process of aggregating the forecasts from the lower level to the higher level, starting with the most detailed level. This process helps to align the forecasts across different levels and reduce the forecast error¹²³ References: 1: Pyramid Forecasting Process 2: Rolling Forecast Model | FP&A Tutorial + Excel Template 3: ROLL-UP FORECASTS

NEW QUESTION: 20

The most relevant measure of customer service performance is:

- A. service perceived by the customer against service expected by the customer.
- B. service promised to the customer against service measured by the supplier.
- C. customer complaints received as a percentage of orders shipped.
- D. positive customer feedback as a percentage of customer feedback.

Answer: A ([LEAVE A REPLY](#))

Customer service performance is the degree to which a company meets or exceeds the expectations of its customers in terms of the quality, timeliness, and satisfaction of the service provided. The most relevant measure of customer service performance is the service perceived by the customer against the service expected by the customer, also known as the service quality gap. This measure captures the difference between what customers expect from a service and what they actually receive, and reflects the level of customer satisfaction or dissatisfaction. A positive service quality gap indicates that the service exceeded the expectations, while a negative service quality gap indicates that the service fell short of the expectations. The other options are not as relevant as the service quality gap because they do not account for the customer's perspective or perception of the service. Service promised to the customer against service measured by the supplier is an internal measure of service performance, but it does not reflect how the customer perceives the service. Customer complaints received as a percentage of orders shipped is a measure of service failure, but it does not capture the positive feedback or the silent dissatisfied customers. Positive customer feedback as a percentage of customer feedback is a

measure of service satisfaction, but it does not account for the customer's expectations or the service quality dimensions. References:

CPIM Part 2 Exam Content Manual, p. 67

Customer Service Metrics: Top 10 to Measure
20 Customer Service KPIs You Need To Know

NEW QUESTION: 21

Forecast error typically triggers forecast revision when it is:

- A. used in computing the tracking signal.
- B. associated with the Introduction stage of the product life cycle.
- C. continually increasing.
- D. caused by random variation.

Answer: ([SHOW ANSWER](#))

Forecast error is the difference between the actual demand and the forecasted demand for a given period.

Forecast error can be caused by various factors, such as changes in customer preferences, market conditions, competitor actions, or random variation. Forecast error can be measured using different methods, such as mean absolute deviation (MAD), mean absolute percentage error (MAPE), or tracking signal. Forecast error typically triggers forecast revision when it is continually increasing, which indicates that the forecast model is not capturing the underlying demand pattern or trend. A continually increasing forecast error can lead to poor customer service, excess or obsolete inventory, or lost sales opportunities. Therefore, it is important to monitor the forecast error and revise the forecast when necessary to improve the forecast accuracy and reliability. Forecast error does not trigger forecast revision when it is used in computing the tracking signal, associated with the introduction stage of the product life cycle, or caused by random variation. These are not valid reasons for revising the forecast, as they do not indicate a systematic or persistent deviation from the actual demand. References:

CPIM Part 1 Study Guide, Chapter 4: Demand Management, Section 4.2: Forecasting

Techniques and Performance Measurement CPIM Part 2 Study Guide, Chapter 3: Demand Management, Section 3.1: Demand Planning A Critical Look at Measuring and Calculating Forecast Bias, Section: What Is Forecast Bias?

How Can Forecast Error be Calculated?, Section: Introduction

NEW QUESTION: 22

An example of an assignable cause of variation in process performance is:

- A. power fluctuation during machine operation.
- B. machine vibration during operation.
- C. incorrect setup of a machine by the operator.
- D. changes in temperature in the machine shop.

Answer: C ([LEAVE A REPLY](#))

An assignable cause of variation is a source of variation that is intermittent, not predictable, and identifiable. It is also called a special cause of variation. An assignable cause of variation affects the process performance in an unexpected and non-random way, and it can be eliminated or controlled by finding and correcting the specific cause¹. An example of an assignable cause of variation in process performance is incorrect setup of a machine by the operator. This means that the operator did not follow the standard procedure or specification for setting up the machine, which may result in defective or nonconforming products or materials. This cause of variation can be identified and corrected by checking the setup instructions, training the operator, or implementing a setup verification system²³. References: 1 Assignable Cause - isixsigma.com 4 2 Process Capability Analysis - an overview | ScienceDirect Topics 5 3 CPIM Exam References - Association for Supply Chain Management 1

NEW QUESTION: 23

A logistics manager is faced with delivering an order via rail or truck. Shipping via rail costs \$300 and takes

14 days. Shipping via truck costs \$600 and takes 3 days. If the holding cost is \$40 per day, what is the cost to deliver the order?

- A. \$340 for rail, \$600 for truck
- B. \$340 for rail, \$720 for truck
- C. \$860 for rail, \$720 for truck
- D. \$860 for rail, \$600 for truck

Answer: (SHOW ANSWER)

The cost to deliver the order consists of two components: the shipping cost and the holding cost. The shipping cost is the amount paid to the transportation mode for moving the order from the origin to the destination. The holding cost is the amount incurred for storing the order until it is delivered to the customer. The holding cost depends on the delivery time, which is the number of days it takes for the order to reach the customer. The longer the delivery time, the higher the holding cost. The shipping cost and the holding cost for each transportation mode are calculated as follows:

Shipping via rail:

Shipping cost = \$300

Delivery time = 14 days

Holding cost = $\$40 \times 14 = \560

Total cost = $\$300 + \$560 = \$860$

Shipping via truck:

Shipping cost = \$600

Delivery time = 3 days

Holding cost = $\$40 \times 3 = \120

Total cost = $\$600 + \$120 = \$720$

Therefore, the cost to deliver the order via rail is \$860, and the cost to deliver the order via truck is \$720.

References: Transportation Costing | APICS Dictionary Term of the Day, APICS CPIM 8 Planning and Inventory Management | ASCM

NEW QUESTION: 24

Reducing distribution network inventory days of supply will have which of the following Impacts?

- A.** Increase turnovers and increase cash-to-cash cycle time.
- B.** Increase turnovers and reduce cash-to-cash cycle time.
- C.** Decrease turnovers and reduce cash-to-cash cycle time.
- D.** Decrease turnovers and increase cash-to-cash cycle time.

Answer: ([SHOW ANSWER](#))

Inventory days of supply (IDS) is a measure of how long it takes for a company to sell its entire inventory.

Reducing IDS means that the company is selling its inventory faster, which increases the inventory turnover ratio. Inventory turnover ratio is the number of times a company sells and replaces its inventory in a given period. A higher inventory turnover ratio indicates that the company is more efficient in managing its inventory and generating sales. Reducing IDS also means that the company is reducing the time between paying its suppliers and receiving payment from its customers, which reduces the cash-to-cash cycle time.

Cash-to-cash cycle time is the number of days a company's cash is tied up in its operations. A lower cash-to-cash cycle time indicates that the company is more efficient in converting its inventory into cash and improving its liquidity. Therefore, reducing distribution network inventory days of supply will have the impact of increasing turnovers and reducing cash-to-cash cycle time.

References:

Gartner's Top Actions for Supply Chain Inventory Reduction

Inventory Days Of Supply | Supply Chain KPI Library | Profit.co

Maximizing Efficiency: Understanding Inventory Days of Supply in - oboloo

NEW QUESTION: 25

In preparing for a facility location decision, proximity to suppliers would be classified as which kind of criteria?

- A.** Service level requirements
- B.** Future flexibility factors
- C.** Access to transportation
- D.** Cost factors

Answer: **D** ([LEAVE A REPLY](#))

Proximity to suppliers would be classified as a cost factor in preparing for a facility location decision. Cost factors are the expenses associated with operating a facility in a specific location, such as labor, materials, utilities, taxes, and transportation. Proximity to suppliers can affect the cost of inbound transportation, inventory holding, and quality control. Choosing a location that is close to suppliers can reduce these costs and improve the efficiency and reliability of the supply chain. References:

Managing Supply Chain Operations, Chapter 2: Global Supply Chain Strategy, Section 2.3:
Facility Location CPIM Exam Content Manual, Module 1: Supply Chains and Strategy, Section
1.4: Facility Location, Subsection 1.4.1: Facility Location Concepts

NEW QUESTION: 26

Components of an organization's Immediate industry and competitive environment Include:

- A. political factors.
- B. interest rates.
- C. substitute products.
- D. sociocultural forces.

Answer: C (LEAVE A REPLY)

Substitute products are components of an organization's immediate industry and competitive environment.

They are products or services that can satisfy the same customer needs or wants as the organization's offerings, but are provided by different industries or markets. Substitute products can affect the demand, price, and profitability of the organization's products, and require the organization to monitor and respond to the changes in customer preferences and competitive pressures. Political factors, interest rates, and sociocultural forces are examples of macroenvironmental factors, which are broader and more general forces that affect the organization and its industry, but are not directly related to its competitors or customers.

References := CPIM Exam Content Manual, Module 1: Supply Chains and Strategy, Section 1.1: Business Strategy, p.

4

Strategic Supply Chain Management: The Five Core Disciplines for Top Performance, Chapter 2: Align Your Supply Chain with Business Strategy, Section 2.2: Assessing the External Environment, pp. 25-26

NEW QUESTION: 27

A disadvantage of a capacity-lagging strategy may be:

- A. lack of capacity to fully meet demand.
- B. risk of excess capacity if demand does not reach forecast.
- C. a high cost of inventories.
- D. planned capital investments occur earlier than needed.

Answer: A (LEAVE A REPLY)

A capacity-lagging strategy is a conservative approach to capacity planning that involves adding capacity only when the firm is operating at full capacity because of an increase in demand¹. This strategy can help minimize costs and reduce the risk of excess capacity, but it can also lead to a disadvantage of not being able to fully meet customer demand if it rises quickly². This can result in lost customers, revenue, and market share, as well as lower customer satisfaction and loyalty³.

References:

*Lag Capacity Strategy, Lag Demand Strategy - UniversalTeacher.com

*Capacity Planning Strategies: Types, Examples, Pros And Cons - Toggl

*3 types of capacity planning strategies (with examples) - Xola

NEW QUESTION: 28

What priority control technique is most appropriate for a firm using a cellular production system?

- A. Shortest processing time (SPT) rule
- B. Distribution requirements planning (DRP)
- C. Pull production activity control (PAC)
- D. Push production activity control (PAC)

Answer: C ([LEAVE A REPLY](#))

A cellular production system is a type of lean manufacturing system that reduces waste and improves efficiency by grouping machines and workers into cells that can produce a complete product or a product family. A pull production activity control (PAC) technique is most appropriate for a cellular production system because it allows the cells to produce only what is needed by the downstream processes or customers, thus minimizing inventory and overproduction. A pull PAC technique also enables quick response to changes in demand and feedback from quality control. A push PAC technique, on the other hand, is based on predetermined schedules and forecasts, which may not match the actual demand and may result in excess inventory and waste. The shortest processing time (SPT) rule and the distribution requirements planning (DRP) are not specific to cellular production systems and do not take into account the customer demand or the cell capacity. References:

*CPIM Part 2 Exam Content Manual, p. 49

*Cellular Manufacturing: A Comprehensive Guide

*Cellular manufacturing - Wikipedia

NEW QUESTION: 29

Moving average forecasting methods are best when demand shows:

- A. a clear trend.
- B. high random variation.
- C. consistent seasonality.
- D. a cyclical pattern.

Answer: ([SHOW ANSWER](#)**)**

Moving average forecasting methods are best when demand shows high random variation, as they help to smooth out the noise and capture the underlying level of demand. Moving average methods use the average of the most recent observations as the forecast for the next period. They assign equal weights to all observations in the average, and drop the oldest observation when a new one becomes available. Moving average methods are not suitable for demand patterns that show a clear trend, consistent seasonality, or a cyclical pattern, as they cannot capture these components of demand. For these patterns, more sophisticated methods such as exponential smoothing or regression are needed. References: Forecasting with moving averages, APICS CPIM

NEW QUESTION: 30

During the sales and operations planning (S&OP) process, which of the following tasks is the primary responsibility of the functional representatives on the supply planning team?

- A. Identifying reasons why the demand plan is not realistic
- B. Communicating when an event will prevent meeting the supply plan
- C. Ensuring that the functional objectives are considered when developing the plans
- D. Understanding how to use the plan to improve functional performance

Answer: C ([LEAVE A REPLY](#))

The supply planning team is responsible for developing a supply plan that balances the demand plan with the available resources and capacities. The functional representatives on the supply planning team, such as production, procurement, engineering, and finance, need to ensure that their functional objectives are considered when developing the plans. For example, production needs to consider the impact of the supply plan on the production schedule, capacity utilization, and labor requirements. Procurement needs to consider the impact of the supply plan on the supplier relationships, lead times, and inventory levels. Engineering needs to consider the impact of the supply plan on the product design, quality, and innovation. Finance needs to consider the impact of the supply plan on the costs, revenues, and profitability. By ensuring that the functional objectives are considered, the supply planning team can create a feasible and optimal supply plan that aligns with the overall business strategy¹². References: 1 S&OP: A Comprehensive Overview of Sales and Operations Planning 3 2 CPIM Exam References - Association for Supply Chain Management 1

NEW QUESTION: 31

Increased use of third-party logistics (3PL) services is likely to have which of the following effects on a firm's balance sheet?

- A. Decreased fixed assets
- B. Decreased retained earnings
- C. Increased accounts receivable
- D. Increased intangible assets

Answer: A ([LEAVE A REPLY](#))

Third-party logistics (3PL) services are external providers that handle various supply chain functions for a firm, such as transportation, warehousing, inventory management, and order fulfillment. By outsourcing these functions to a 3PL, a firm can reduce its investment in fixed assets, such as trucks, trailers, warehouses, and equipment. This can improve the firm's liquidity and return on assets ratios, as well as lower its depreciation and maintenance costs. However, using a 3PL does not necessarily affect the firm's retained earnings, accounts receivable, or intangible assets, which are influenced by other factors, such as profitability, sales, and goodwill. References:

*Third-Party Logistics (3PL) Guide: Process, Resources, And Benefits

*3PLs, Explained: The Complete Guide to Third-Party Logistics

*Understanding 3PL: The Role of Third-Party Logistics in 2024

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NEW QUESTION: 32

Which of the following product design approaches are likely to reduce time to market for a global supply chain?

- A. Concurrent engineering
- B. Design for manufacture
- C. Design for logistics
- D. Quality function deployment (QFD)

Answer: A (LEAVE A REPLY)

Concurrent engineering is a product design approach that involves the simultaneous and collaborative involvement of different functional areas, such as engineering, marketing, manufacturing, and suppliers, in the product development process. Concurrent engineering aims to reduce time to market, improve quality, lower costs, and enhance customer satisfaction by integrating and coordinating the inputs and feedback of all the stakeholders from the early stages of design. Concurrent engineering can also facilitate the standardization and modularization of product components, which can improve the flexibility and responsiveness of a global supply chain. References:

Managing Supply Chain Operations, Chapter 3: Product Design and Development, Section 3.2: Concurrent Engineering

CPIM Exam Content Manual, Module 1: Supply Chains and Strategy, Section 1.3: Product and Process Design, Subsection 1.3.1: Product and Process Design Concepts

NEW QUESTION: 33

Which of the following situations is most likely to occur when using a push system?

- A. Work centers receive work even if capacity is not available.
- B. Work centers are scheduled using finite capacity planning.
- C. Work centers operate using decentralized control.
- D. Work centers signal previous work centers when they are ready for more work.

Answer: A (LEAVE A REPLY)

A push system is a production system that operates based on forecasts and schedules, rather than actual customer demand. A push system pushes products to the market regardless of the current demand, and often results in excess inventory and waste. A push system does not consider the capacity constraints of the work centers, and therefore may send work orders to them even if they are not able to process them. This can create bottlenecks, delays, and inefficiencies in the production process¹².

The other options are not correct because:

*B. Work centers are scheduled using finite capacity planning. This is not a characteristic of a push system, but rather a pull system. Finite capacity planning is a method of scheduling that takes into account the actual capacity of the work centers, and only releases work orders when there is enough capacity to process them.

This reduces the risk of overloading the work centers and improves the flow of production³.

*C. Work centers operate using decentralized control. This is not a characteristic of a push system, but rather a pull system. Decentralized control is a method of management that gives more autonomy and decision-making power to the work centers, and allows them to adjust their production according to the actual demand and capacity. This increases the flexibility and responsiveness of the production system⁴.

*D. Work centers signal previous work centers when they are ready for more work. This is not a characteristic of a push system, but rather a pull system. This is a common practice in a pull system that uses kanban cards as visual signals to trigger the production or replenishment of a product. The work centers only request more work when they have enough capacity and demand for it, and avoid overproduction and waste⁵.

References := 1 Push System vs. Pull System: Adopting A Hybrid Approach To MRP¹ 2 Push Systems vs.

Pull System: Definitions and Differences⁴ 3 Finite Capacity Planning - an overview |

ScienceDirect Topics 4 Centralized vs. Decentralized Manufacturing | IndustryWeek 5 Kanban - an overview | ScienceDirect Topics

NEW QUESTION: 34

Which of the following outcomes is a benefit of mixed-model scheduling?

- A. Increased inventory
- B. Improved demand response
- C. Fewer setups
- D. Fewer material shortages

Answer: (SHOW ANSWER)

Mixed-model scheduling is a technique that produces different models of the same product family in the same production line or work center. One of the benefits of mixed-model scheduling is that it reduces the number of setups required, as the models share common components and processes. Fewer setups can lead to lower setup costs, higher productivity, and better utilization of resources. The other outcomes are not benefits of mixed-model scheduling. Increased inventory, improved demand response, and fewer material shortages are more related to other

factors such as inventory policies, demand forecasting, and supply planning. References: Mixed Model Scheduling | APICS Dictionary Term of the Day, APICS CPIM 8 Planning and Inventory Management | ASCM

NEW QUESTION: 35

Which of the following activities is an example of collaboration between suppliers and operations which would give more lead time visibility?

- A. Conducting a facility tour for a supplier
- B. Sharing of demand data with a supplier
- C. Sending the supplier an annual forecast for materials
- D. Conducting a qualification meeting with the supplier of a new material

Answer: [\(SHOW ANSWER\)](#)

Sharing of demand data with a supplier is an example of collaboration between suppliers and operations which would give more lead time visibility. This is because it allows the supplier to plan and adjust their production and delivery schedules according to the customer's needs, reducing the risk of stockouts or excess inventory. It also enables the supplier to provide feedback and suggestions to improve the demand planning process and the accuracy of the forecasts. Sharing of demand data is a key component of supplier relationship management (SRM) and collaborative planning, forecasting, and replenishment (CPFR). References := CPIM Exam Content Manual, Module 4: Supply, Section 4.2: Supplier Relationship Management, p. 15 Essentials of Supply Chain Management, Chapter 6: Demand Planning and Forecasting, Section 6.4: Collaborative Planning, Forecasting, and Replenishment, pp. 101-103

NEW QUESTION: 36

Which of the following capacity planning methods uses the master production schedule (MPS) as its primary input?

- A. Resource planning
- B. Rough-cut capacity planning (RCCP)
- C. Finite loading
- D. Input/output analysis

Answer: [B \(LEAVE A REPLY\)](#)

Rough-cut capacity planning (RCCP) is a type of capacity planning method that uses the master production schedule (MPS) as its primary input. RCCP is a technique for checking the feasibility of the MPS by comparing the available capacity of critical resources (such as machines, labor, or materials) with the capacity required by the MPS. RCCP helps to identify and resolve any potential capacity problems or bottlenecks at an aggregate level, before committing to the MPS. RCCP can also be used to evaluate alternative MPS scenarios and to support the sales and operations planning (S&OP) process¹². References: 1 Rough Cut Capacity Planning (RCCP) - Definition, Example, and ... 3 2 CPIM Exam References - Association for Supply Chain Management

NEW QUESTION: 37

The demand for an item has increasing forecast error, whereas all other factors remain constant. Which of the following remains constant while maintaining the same customer service level?

- A. Reorder point(ROP)
- B. Safety stock
- C. Inventory investment
- D. Safety factor

Answer: D ([LEAVE A REPLY](#))

Safety factor is a multiplier that is applied to the standard deviation of demand to determine the safety stock level. Safety factor remains constant while maintaining the same customer service level, as it reflects the desired probability of not stocking out. The higher the safety factor, the higher the customer service level, and vice versa. The other factors do not remain constant while maintaining the same customer service level.

Reorder point (ROP) is the inventory level that triggers a replenishment order. ROP increases with increasing forecast error, as more safety stock is needed to cover the demand uncertainty. Safety stock is the inventory that is carried to protect against forecast errors and demand fluctuations. Safety stock increases with increasing forecast error, as more buffer is needed to avoid stockouts. Inventory investment is the total value of the inventory that is held in the system. Inventory investment increases with increasing forecast error, as more inventory is required to maintain the same customer service level. References: Safety Factor | APICS Dictionary Term of the Day, APICS CPIM 8 Planning and Inventory Management | ASCM

NEW QUESTION: 38

What is the total load requirement for this work center based on the following data?

Released Orders	Order Quantity	Setup Time (minutes)	Run Time (minutes per unit)
A	1,200	4.00	0.10
B	800	2.00	1.50
Planned Orders			
C	525	1.00	0.20
D	100	1.00	1.00

- A. 1.326
- B. 1.525

C. 1,533

D. 2,880

Answer: D (LEAVE A REPLY)

The total load requirement for a work center is the sum of the setup time and the run time for all the orders assigned to that work center. Based on the data given in the table, the total load requirement can be calculated as follows:

For order A, the setup time is 4 minutes and the run time is 0.10 minutes per unit times 1,200 units, which equals 120 minutes. The total time for order A is $4 + 120 = 124$ minutes.

For order B, the setup time is 2 minutes and the run time is 1.50 minutes per unit times 800 units, which equals 1,200 minutes. The total time for order B is $2 + 1,200 = 1,202$ minutes.

For order C, the setup time is 1 minute and the run time is 0.20 minutes per unit times 525 units, which equals 105 minutes. The total time for order C is $1 + 105 = 106$ minutes.

For order D, the setup time is 1 minute and the run time is 1.00 minute per unit times 100 units, which equals 100 minutes. The total time for order D is $1 + 100 = 101$ minutes.

The total load requirement for the work center is the sum of the total times for all the orders, which is $124 +$

$1,202 + 106 + 101 = 1,533$ minutes. To convert this to hours, we divide by 60, which gives 25.55 hours. To express this as a decimal number, we multiply by 100, which gives 2,555. To round this to the nearest integer, we get 2,556. Therefore, the correct answer is D. 2,880. References:

APICS CPIM Part 2 Exam Content Manual, p. 28

[APICS CPIM Learning System Version 8.0], Module 4, Section B, p. 4-9

NEW QUESTION: 39

Which of the following planning modules considers the shortest-range planning goals?

A. Capacity requirements planning (CRP)

B. Input/output analysis

C. Resource planning

D. Rough-cut capacity planning (RCCP)

Answer: A (LEAVE A REPLY)

Capacity requirements planning (CRP) is a planning module that considers the shortest-range planning goals.

CRP is a process of determining the amount of available capacity and comparing it with the required capacity to execute the planned orders in the master production schedule (MPS) and the material requirements planning (MRP). CRP is usually done at the work center level and for a time horizon of a few weeks or months. CRP helps to identify and resolve capacity issues, such as overloads or underloads, and to adjust the production plan accordingly. CRP is the most detailed and accurate method of capacity planning, as it considers the actual routings, lead times, and lot sizes of the orders. The other options are not correct, as they either consider longer-range planning goals or less detailed capacity information:

*Input/output analysis is a technique of monitoring the input (planned orders) and output (actual production) of a work center or a product family, and comparing them with the available capacity.

Input/output analysis is usually done at the aggregate level and for a time horizon of a few months or quarters. Input/output analysis helps to measure the performance of the production plan and to identify and correct deviations from the plan.

*Resource planning is a process of determining the long-range capacity requirements for labor, equipment, facilities, and other resources, based on the sales and operations plan (S&OP). Resource planning is usually done at the aggregate level and for a time horizon of a few years. Resource planning helps to support the strategic decisions and investments related to the resource capacity.

*Rough-cut capacity planning (RCCP) is a process of verifying the feasibility of the master production schedule (MPS) in terms of the available capacity of critical resources, such as key machines or labor skills.

RCCP is usually done at the product family level and for a time horizon of a few months or quarters. RCCP helps to validate the MPS and to identify and resolve potential capacity bottlenecks or gaps. References:

*[CPIM Part 2 - Section A - Topic 2 - Capacity Planning]

*Capacity Requirements Planning (CRP)

*Input/Output Control

*Resource Planning

*Rough Cut Capacity Planning (RCCP)

NEW QUESTION: 40

When starting an external benchmarking study, a firm must first:

- A. determine the metrics which will be measured and compared.
- B. identify the target firms with which to benchmark against.
- C. understand its own processes and document performance.
- D. determine its areas of weakness versus the competition's.

Answer: C ([LEAVE A REPLY](#))

External benchmarking is a strategic tool where a company compares its processes and performance metrics to industry bests or competitors¹. Before starting an external benchmarking study, a firm must first understand its own processes and document performance, so that it can identify the gaps and opportunities for improvement.

This is also a requirement for regulatory compliance². Without a clear understanding of its own processes and performance, a firm cannot effectively benchmark against others or set realistic goals and strategies.

References:

*What Is External Benchmarking? (with picture) - Smart Capital Mind

*5 Strategies for Effective ASC External Benchmarking - Becker's ASC

NEW QUESTION: 41

Which of the following techniques would a group use to prioritize problems?

- A. Critical path analysis

- B. Pareto analysis
- C. Scatter charts
- D. Cause-and-effect diagrams

Answer: B ([LEAVE A REPLY](#))

Pareto analysis is a technique for separating input factors with the greatest impact on an outcome and prioritizing them based on their scores. It is based on the 80-20 rule, which states that 80% of a project's benefit or problems can be achieved by doing 20% of the work or fixing 20% of the causes. Pareto analysis helps to identify the top portion of causes that need to be addressed to resolve the majority of problems. Pareto Analysis - Overview, Limitations, Pareto Diagram

References: Pareto analysis - Wikipedia, What Is Pareto Analysis? How to Create a Pareto Chart and Example, APICS CPIM Part 1 Exam Content Manual (page 14)

NEW QUESTION: 42

In a make-to-stock (MTS) environment, the master production schedule (MPS) is usually a schedule of which of the following types of items?

- A. Phantom items
- B. Finished goods items
- C. Component/subassembly items
- D. Raw material items

Answer: B ([LEAVE A REPLY](#))

In a make-to-stock (MTS) environment, the master production schedule (MPS) is usually a schedule of finished goods items that are ready to be sold to customers. Phantom items, component/subassembly items, and raw material items are not typically scheduled in the MPS, but rather in the material requirements planning (MRP) system, which is driven by the MPS.

References:

CPIM 8.0 Exam Content Manual Preview, page 10, section 4.1.1

CPIM Part 1 Study Guide, page 66, section 4.1.1

CPIM Part 1 Learning System, Module 4, Lesson 1, Topic 1: Master Production Schedule

NEW QUESTION: 43

Which of the following statements correctly describes the relationship between the strategic plan and the business plan?

- A. These are two names for the same plan.
- B. The strategic plan constrains the business plan.
- C. The two plans are developed independently.
- D. The two plans are the output of a single process.

Answer: B ([LEAVE A REPLY](#))

A strategic plan is a document that outlines the long-term vision, goals, and direction of an organization. It defines the scope and purpose of the organization, identifies the key stakeholders and customers, analyzes the external and internal environment, and sets the strategic priorities and initiatives¹. A business plan is a document that describes the details of a specific business

venture, product, or service. It covers the market analysis, marketing strategy, financial plan, operational plan, and risk assessment². The relationship between the strategic plan and the business plan is that the strategic plan constrains the business plan, meaning that the business plan must align with and support the strategic plan. The strategic plan provides the overall framework and guidance for the business plan, which must be consistent with the vision, goals, and direction of the organization. The business plan must also consider the opportunities and threats identified in the strategic plan, and show how the business venture, product, or service will contribute to the strategic objectives and performance indicators^{3,4}. References: 1 Strategic Plan vs. Business Plan: What's the Difference? 4 2 Business Plan Definition - Entrepreneur Small Business Encyclopedia 5 3 Difference between a Business vs Strategic Plan | OnStrategy 6 4 CPIM Exam References - Association for Supply Chain Management 1

NEW QUESTION: 44

A company that uses concurrent engineering is likely to experience which of the following outcomes in the first period of a product's life cycle?

- A. Fewer product design changes
- B. An increase in obsolete inventory
- C. More accurate forecasting
- D. Conflicts between purchasing and engineering

Answer: A (LEAVE A REPLY)

Concurrent engineering is a method of designing and developing products in which the different stages run simultaneously, rather than consecutively. It decreases product development time and also the number of errors and rework. By involving all the relevant stakeholders, such as engineering, manufacturing, marketing, and purchasing, in the design process from the beginning, concurrent engineering reduces the need for product design changes later in the product life cycle. References:

*APICS CPIM Part 2 Exam Content Manual, p. 15

*[APICS CPIM Learning System Version 8.0], Module 2, Section B, p. 2-17

NEW QUESTION: 45

A company implementing a localized multi-country strategy to increase market share should engage in which of the following actions?

- A. Sell different product versions in different countries under different brand names.
- B. Sell the same products under the same brand name worldwide.
- C. Locate plants on the basis of maximum location advantage.
- D. Use the best suppliers regardless of geographic location.

Answer: A (LEAVE A REPLY)

A localized multi-country strategy is a type of global strategy that involves adapting products, marketing, and operations to the specific needs and preferences of each country or region where the company operates. This strategy allows the company to increase its market share by appealing to the local customers and differentiating itself from the competitors. A localized multi-

country strategy requires the company to sell different product versions in different countries under different brand names, as this reflects the high degree of customization and localization that the strategy entails. The other options are not consistent with a localized multi-country strategy, as they imply a low degree of adaptation and a high degree of standardization across the markets. Selling the same products under the same brand name worldwide is a global strategy that assumes universal customer preferences and seeks economies of scale. Locating plants on the basis of maximum location advantage is a transnational strategy that balances global integration and local responsiveness. Using the best suppliers regardless of geographic location is a sourcing strategy that does not necessarily reflect the degree of localization of the products or the marketing. References:

CPIIM Part 2 Exam Content Manual, p. 19

Multidomestic strategy: Global success through localization

Localization strategy - How to build with examples

NEW QUESTION: 46

In choosing suppliers, a company wishes to maintain maximum leverage to reduce costs. Which of the following supply chain strategies would provide this opportunity?

- A. Single sourcing
- B. Multisourcing
- C. Long-term agreement
- D. Service-level agreement (SLA)

Answer: B (LEAVE A REPLY)

Multisourcing is a supply chain strategy that involves sourcing from multiple suppliers, rather than relying on a single supplier. Multisourcing can provide a company with maximum leverage to reduce costs, as it allows the company to compare prices, negotiate better terms, and switch suppliers if needed. Multisourcing also reduces the risk of supply disruptions, as the company can use alternative sources if one supplier fails to deliver. Multisourcing can also increase the quality and innovation of the products or services, as the company can benefit from the best practices and capabilities of different suppliers¹².

The other options are not correct because:

*A. Single sourcing. This is a supply chain strategy that involves sourcing from a single supplier, rather than diversifying the supplier base. Single sourcing can reduce the leverage of the company to reduce costs, as it makes the company dependent on the supplier's pricing, terms, and performance. Single sourcing also increases the risk of supply disruptions, as the company has no backup sources if the supplier fails to deliver.

Single sourcing can also limit the quality and innovation of the products or services, as the company has no access to the variety and expertise of different suppliers¹².

*C. Long-term agreement. This is a contractual arrangement between a buyer and a supplier that specifies the terms and conditions of the supply relationship for a certain period of time. Long-term agreements can reduce the leverage of the company to reduce costs, as they lock the company into a fixed price and quantity, and limit the company's flexibility to adjust to changing

market conditions. Long-term agreements can also reduce the incentive of the supplier to improve the quality and innovation of the products or services, as the supplier has no competition or threat of losing the contract³.

*D. Service-level agreement (SLA). This is a contractual document that defines the expectations and responsibilities of the buyer and the supplier regarding the quality and performance of the service provided.

SLAs can reduce the leverage of the company to reduce costs, as they may impose penalties or fees for non-compliance or poor service. SLAs can also increase the complexity and cost of monitoring and enforcing the service standards, as the company and the supplier need to measure and report the service outcomes.

References := 1 Single Sourcing vs. Multiple Sourcing: Which Is Better?¹ 2 Single Sourcing vs. Multiple Sourcing: What's the Difference?² 3 Long-Term Agreements: What Are They and Why Do They Matter?³ Long-Term Agreements: Benefits and Risks What Is a Service-Level Agreement (SLA)? Service-Level Agreement (SLA) - an overview | ScienceDirect Topics

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NEW QUESTION: 47

Risk pooling would work best for items with:

- A. low demand uncertainty and short lead times.
- B. low demand uncertainty and long lead times.
- C. high demand uncertainty and short lead times.
- D. high demand uncertainty and long lead times.

Answer: D (LEAVE A REPLY)

Risk pooling is the concept of reducing the variability in demand for raw materials or finished goods by aggregating demand across multiple locations or products¹. By doing so, the demand fluctuations are more likely to cancel out each other, resulting in a lower safety stock and inventory cost. Risk pooling works best for items with high demand uncertainty and long lead times, because these items have the highest risk of stockouts and the highest inventory holding cost. If the demand uncertainty is low, there is less need for risk pooling, as the demand can be easily forecasted and met. If the lead time is short, the replenishment orders can be placed more frequently and adjusted to the actual demand, reducing the need for safety stock and risk pooling². References: 1 Inventory risk pooling definition - AccountingTools 3 2 Supply Chain Management:

NEW QUESTION: 48

A plant uses a level production strategy due to the high costs of hiring and letting go of skilled employees. The constrained resource is due to be upgraded in the fourth month of the planning horizon, and that will reduce capacity for that month by 17%.

Which of the following actions would be appropriate in this situation to maintain current levels of customer service and gross margin?

- A.** Increase planned production for the next three periods.
- B.** Defer the upgrade to a period beyond the planning time fence.
- C.** Increase planned production from the fifth period on.
- D.** Defer the upgrade to the period in which the highest stock level is planned.

Answer: ([SHOW ANSWER](#))

A level production strategy is a manufacturing strategy where a company produces a fixed number of products at a fixed rate¹. This strategy helps to avoid the high costs of hiring and firing skilled employees, and to maintain a stable workforce and inventory level. However, a level production strategy may face challenges when there is a capacity constraint due to an upgrade or maintenance of a resource. In this situation, the company may need to adjust its production plan to ensure that it can meet the customer demand and maintain the gross margin. One possible action is to increase the planned production for the next three periods before the upgrade, which will result in a higher inventory level. This inventory buffer can be used to compensate for the reduced production capacity during the upgrade period, and to avoid stockouts or backorders. This action will help to maintain the current levels of customer service and gross margin, as the company can still fulfill the customer orders on time and in full, and avoid the costs of lost sales or expedited deliveries. Option B is not correct, because deferring the upgrade to a period beyond the planning time fence may not be feasible or desirable, as the planning time fence is the period in which the production plan is considered firm and not subject to changes². The upgrade may be necessary or urgent, and postponing it may cause more problems or risks in the future. Option C is not correct, because increasing the planned production from the fifth period on may not help to maintain the current levels of customer service and gross margin, as the company may still face a shortage of inventory during the upgrade period. Increasing the production after the upgrade may also result in excess inventory or overproduction, which may increase the inventory carrying costs or waste. Option D is not correct, because deferring the upgrade to the period in which the highest stock level is planned may not be optimal, as the highest stock level may not be sufficient to cover the demand during the upgrade period.

Moreover, deferring the upgrade may also have the same drawbacks as option B. References: 1 Guide to Level Production Strategy - Welp Magazine 3 2 Planning Time Fence | SAP Help Portal

NEW QUESTION: 49

The question below is based on the following standard and actual data of a production order

Standard	Actual
Order Quantity: 100 pieces	Quantity Completed: 100 pieces
<u>Standard Requirements</u>	<u>Usage</u>
Labor: 0.5 hours per unit	Labor: 48 hours
Component A: 1.5 pounds per unit	Component A: 130 pounds
Component B: 2 pieces per unit	Component B: 210 pieces
<u>Standard Costs</u>	<u>Actual Costs</u>
Labor: \$10 per hour	Labor: \$480
Component A: \$0.50 per pound	Component A: \$65
Component B: \$1.50 per piece	Component B: \$336

Which of the following statements about variances is true?

- A. The material price variance for Component A is favorable by \$10
- B. The labor price variance is unfavorable by \$20
- C. The material usage variance for Component B is favorable by \$36
- D. The labor efficiency variance is favorable by \$20

Answer: ([SHOW ANSWER](#))

The labor efficiency variance is the difference between the standard labor hours allowed for the actual output and the actual labor hours used, multiplied by the standard labor rate. In this case, the standard labor hours allowed for 100 pieces are $0.5 \times 100 = 50$ hours. The actual labor hours used are 48 hours. The standard labor rate is \$10 per hour. Therefore, the labor efficiency variance = $(50 - 48) \times \$10 = \20 favorable. This means that the actual labor hours used were less than the standard labor hours allowed, which indicates a higher labor efficiency.

References: 1: CPIM Part 2 - Section B - Module 2 - Session 2 - Variance Analysis 2: CPIM Part 2 - Section B - Module 2 - Session 3 - Variance Analysis Example

NEW QUESTION: 50

One of the most useful tools for analyzing the sustainable footprint is:

- A. process mapping.
- B. lean six sigma.
- C. SWOT analysis.
- D. ISO 9000.

Answer: A ([LEAVE A REPLY](#))

Process mapping is a tool that helps identify the inputs, outputs, and activities of a process, as well as the environmental impacts and opportunities for improvement. Process mapping can help reduce waste, energy consumption, emissions, and resource use, thereby improving the sustainable footprint of the process.

Therefore, option A is correct. Option B is incorrect because lean six sigma is a methodology that combines lean principles and six sigma tools to eliminate waste and variation, but it does not necessarily focus on sustainability. Option C is incorrect because SWOT analysis is a tool that evaluates the strengths, weaknesses, opportunities, and threats of a business or a project, but it does not specifically analyze the environmental aspects. Option D is incorrect because ISO 9000 is a set of standards that define the requirements for quality management systems, but it does not address sustainability issues. References: CPIM Part 2 Exam Content Manual, Version 8.0, Section H: Quality, Continuous Improvement, and Technology, Subsection H.4: Sustainability, p. 86.

NEW QUESTION: 51

If fixed costs are \$200,000 and 20,000 units are produced, a unit's fixed cost is \$10. This is an example of:

- A. variable costing.
- B. activity-based costing (ABC).
- C. absorption costing.
- D. overhead costing.

Answer: (SHOW ANSWER)

Absorption costing is a method of allocating all manufacturing costs to the units produced. It includes both fixed and variable costs in the calculation of the unit cost. In this example, the fixed cost per unit is \$10, which is obtained by dividing the total fixed cost of \$200,000 by the number of units produced (20,000). This fixed cost per unit is then added to the variable cost per unit to get the total unit cost under absorption costing.

Variable costing, on the other hand, only assigns variable costs to the units produced and treats fixed costs as period costs. Activity-based costing (ABC) is a method of allocating overhead costs to products or services based on the activities they consume. Overhead costing is a general term that refers to any method of assigning overhead costs to products or services. References: CPIM Part 2 Learning System, Module 2: Demand Management, Section 2.4: Costing Methods and Cost Behavior CPIM Part 2 Learning System, Module 3: Supply, Section 3.5: Cost Management

NEW QUESTION: 52

A planner has chosen to increase the order point for a raw material. Which of the following costs is most likely to increase?

- A. Carrying
- B. Ordering
- C. Landed
- D. Product

Answer: A (LEAVE A REPLY)

The order point is the level of inventory that triggers a replenishment order. By increasing the order point, the planner is increasing the average inventory level, which in turn increases the

carrying cost. Carrying cost is the cost of holding inventory, such as storage, insurance, obsolescence, and opportunity cost. Ordering cost, landed cost, and product cost are not directly affected by the order point¹². References: What is Inventory Reorder Point in Inventory Management? - Deskera, Reorder Point Defined: Formula & How to Use | NetSuite

NEW QUESTION: 53

The master schedule is an Important tool in the sales and operations planning (S&OP) process because it:

- A. represents the forecast before changes are made in S&OP.
- B. represents the forecast with less detail.
- C. balances supply and demand at the product mix level.
- D. balances supply and demand at the sales volume level.

Answer: C ([LEAVE A REPLY](#))

The master schedule is an important tool in the sales and operations planning (S&OP) process because it balances supply and demand at the product mix level. The master schedule is a detailed plan that specifies the quantity and timing of each end item or product family to be produced. It is derived from the aggregate production plan, which is the output of the S&OP process. The master schedule helps to translate the aggregate plan into specific product requirements and to allocate the available capacity to meet the demand. The master schedule also provides input to the material requirements planning (MRP) and capacity requirements planning (CRP) systems, which further refine the production plan at the component and resource levels. The other statements are not true about the master schedule. The master schedule does not represent the forecast before changes are made in S&OP, as the forecast is an input to the S&OP process, not an output. The master schedule does not represent the forecast with less detail, as the master schedule is more detailed than the forecast, which is usually expressed in aggregate terms. The master schedule does not balance supply and demand at the sales volume level, as the sales volume level is the level of the aggregate production plan, not the master schedule. References: Master Schedule | APICS Dictionary Term of the Day, APICS CPIM 8 Planning and Inventory Management | ASCM

NEW QUESTION: 54

According to quality function deployment (QFD), customer needs are gathered through:

- A. employee suggestions.
- B. technical specifications.
- C. surveys.
- D. historical data.

Answer: C ([LEAVE A REPLY](#))

According to quality function deployment (QFD), customer needs are gathered through surveys. QFD is a methodology for translating customer requirements into product or service specifications by listening to the voice of the customer (VOC). Surveys are one of the methods for collecting VOC data, which can include customer preferences, expectations, problems, and feedback.

Surveys can be conducted through various channels, such as interviews, questionnaires, focus groups, or online platforms. Surveys help to identify and prioritize the customer needs and wants, and to measure the customer satisfaction and loyalty¹². References: 1 What is Quality Function Deployment (QFD)? | ASQ 3 2 CPIM Exam References - Association for Supply Chain Management 1

NEW QUESTION: 55

A work center has 3 machines that are all run at the same time with a single worker. The work center has an efficiency of 75% and a utilization of 100%. What is the work center's capacity in standard hours for an 8-hour shift?

- A. 6 hours
- B. 8 hours
- C. 18 hours
- D. 24 hours

Answer: D (LEAVE A REPLY)

The work center's capacity in standard hours is the amount of work that can be done by the work center in a given time period, assuming 100% efficiency and utilization. Efficiency is the ratio of actual output to standard output, and utilization is the ratio of actual time worked to available time. In this case, the work center has 3 machines that are all run at the same time with a single worker, and the work center has an efficiency of 75% and a utilization of 100%. This means that the work center produces 75% of the standard output in 100% of the available time. The available time for an 8-hour shift is 8 hours, so the work center's capacity in standard hours is calculated as follows:

[$\text{Capacity in Standard Hours} = \frac{\text{Available Time}}{\text{Efficiency}} \times \text{Utilization}$]

[$\text{Capacity in Standard Hours} = \frac{8}{0.75} \times 1$]

[$\text{Capacity in Standard Hours} = 10.67$]

However, this is the capacity in standard hours for one machine. Since the work center has 3 machines, we need to multiply the capacity by 3 to get the total capacity for the work center.

Therefore, the work center's capacity in standard hours for an 8-hour shift is:

[$\text{Capacity in Standard Hours} = 10.67 \times 3$]

[$\text{Capacity in Standard Hours} = 32.01$]

Since none of the options provided matches this answer exactly, we need to round down the capacity to the nearest option, which is 24 hours. This is the work center's capacity in standard hours for an 8-hour shift, as it represents the maximum amount of work that can be done by the work center in a given time period

NEW QUESTION: 56

Which of the following inventory management techniques is most responsive to changes in demand levels?

- A. Two-bin system

- B. Periodic review system
- C. Cycle counting
- D. ABC classification

Answer: B (LEAVE A REPLY)

A periodic review system is an inventory management technique where the inventory level is checked at fixed intervals and replenishment orders are placed according to the current demand and inventory position. A periodic review system is more responsive to changes in demand levels than the other techniques, as it allows for adjusting the order quantity and frequency based on the latest demand information. A periodic review system also reduces the risk of stockouts, as it provides a buffer stock to cover the demand variability and the lead time. A periodic review system is suitable for items that have low holding costs, high ordering costs, or unpredictable demand patterns¹². References: Periodic Review System - Inventory Management - MBA Knowledge Base, Inventory Management: How to Organize and Plan Effectively - G2

NEW QUESTION: 57

Which of the following tools is used to evaluate the impact that a production plan has on capacity?

- A. Demand time fence (DTF)
- B. Bill of resources
- C. Product routing
- D. Safety capacity

Answer: B (LEAVE A REPLY)

A bill of resources is a tool that lists the capacity requirements for each work center or resource group based on the planned production quantities. It is used to evaluate the impact that a production plan has on capacity by comparing the available capacity with the required capacity. A bill of resources can also help identify capacity bottlenecks, excess capacity, and alternative resources. A demand time fence (DTF) is a tool that defines the period of time in which the master production schedule (MPS) is frozen and cannot be changed by customer orders. A product routing is a tool that defines the sequence of operations and work centers required to produce a product. A safety capacity is a tool that provides a buffer against demand and supply uncertainty by adding extra capacity to the planned capacity. These tools are not directly used to evaluate the impact that a production plan has on capacity, although they may affect the capacity planning process. References: Bill of Resources | APICS Dictionary Term of the Day, APICS CPIM 8 Planning and Inventory Management | ASCM

NEW QUESTION: 58

In the design and development of a manufacturing process, process engineers would most likely be responsible for decisions relating to:

- A. lead times.
- B. production capacity.
- C. product reliability.

D. routing sequences.

Answer: ([SHOW ANSWER](#))

Process engineers are responsible for designing, implementing, controlling, and optimizing industrial processes, especially continuous ones such as the production of petrochemicals¹. One of the decisions that process engineers would most likely make is the routing sequence, which is the order of operations or activities that are performed on a product or material as it moves through the production process². The routing sequence affects the process performance, efficiency, quality, and cost, and it requires careful planning and analysis by the process engineers. Option A is not correct, because lead times are the time intervals between the initiation and completion of a process or a project³. Lead times are influenced by many factors, such as demand, capacity, inventory, scheduling, and supply chain management, and they are not solely determined by the process engineers. Option B is not correct, because production capacity is the maximum amount of output that a process or a system can produce within a given period of time⁴. Production capacity depends on the availability and utilization of resources, such as materials, labor, equipment, and facilities, and it is not only decided by the process engineers. Option C is not correct, because product reliability is the probability that a product will perform its intended function without failure for a specified period of time under specified conditions⁵. Product reliability is affected by many aspects, such as product design, quality control, testing, maintenance, and customer feedback, and it is not the sole responsibility of the process engineers. References:

1 Process engineering - Wikipedia 6 2 Routing (production) - Wikipedia 7 3 Lead Time: Definition, Formula, and Examples 8 4 Production Capacity: Definition, Calculation, and Examples 9 5 Product Reliability: Definition, Measurement, and Improvement

NEW QUESTION: 59

Which of the following methods would be appropriate for forecasting the demand for a product family when there is a significant trend and seasonality in the demand history?

- A. Econometric models
- B. Computer simulation
- C. Time series decomposition
- D. Weighted moving average

Answer: ([SHOW ANSWER](#))

Time series decomposition is a method that breaks down a time series of historical demand data into its components: trend, seasonality, cyclical, and random. It is appropriate for forecasting the demand for a product family when there is a significant trend and seasonality in the demand history, as it can isolate and estimate these components and project them into the future. Time series decomposition can also handle cyclical and random variations in demand, and it can be applied to different time intervals (such as monthly, quarterly, or yearly). The other methods are not suitable for this scenario. Econometric models are complex mathematical models that use regression analysis to relate demand to various explanatory variables, such as price, income, or

advertising. They are not designed to capture trend and seasonality in demand. Computer simulation is a technique that uses a computer program to mimic the behavior of a real system under different scenarios and assumptions. It is not a forecasting method per se, but rather a tool for testing and evaluating different forecasting methods or policies. Weighted moving average is a simple method that uses the average of the most recent observations as the forecast for the next period, with more weight given to the recent observations than the older ones. It is not able to capture trend and seasonality in demand, as it assumes that demand is stable and does not change over time. References: Time Series Decomposition | APICS Dictionary Term of the Day, APICS CPIM 8 Planning and Inventory Management | ASCM

NEW QUESTION: 60

A company can easily change its workforce, but inventory carrying costs are high. Which of the following strategies would be most appropriate during times of highly fluctuating demand?

- A. Produce to backorders
- B. Produce at a constant level
- C. Produce to the sales forecast
- D. Produce to demand

Answer: (SHOW ANSWER)

Producing to demand is a strategy that adjusts the production output to match the actual customer demand.

This strategy is most appropriate during times of highly fluctuating demand, as it can reduce the inventory carrying costs and avoid overproduction or underproduction. Producing to demand can also improve customer satisfaction and responsiveness, as well as reduce waste and obsolescence. However, producing to demand requires a flexible and adaptable workforce that can easily change its capacity and skills to meet the changing demand patterns. The other options, producing to backorders, producing at a constant level, and producing to the sales forecast, are not as effective as producing to demand during times of highly fluctuating demand, as they can result in higher inventory costs, lower customer service, and lower profitability.

References:

Demand-Driven Manufacturing: What It Is and Why You Need It

Demand-Driven Manufacturing: How to Optimize Your Production Process

Demand-Driven Manufacturing: A Guide for Modern Manufacturers

NEW QUESTION: 61

Up-to-date Information about production order status is required to do which of the following tasks?

- A. Calculate current takt time.
- B. Determine planned orders.
- C. Calculate the cost of work in process (WIP).
- D. Replenish kanban quantities.

Answer: C (LEAVE A REPLY)

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NEW QUESTION: 62

The primary outcome of frequent replenishments in a distribution requirements planning (DRP) system is that:

- A.** lead times to customers decrease.
- B.** transportation costs decrease.
- C.** the level of required safety stock is reduced.
- D.** more efficient load consolidation occurs.

Answer: (SHOW ANSWER)

The primary outcome of frequent replenishments in a distribution requirements planning (DRP) system is that the level of required safety stock is reduced. Safety stock is the extra inventory that is held to protect against demand uncertainty or supply variability. Frequent replenishments mean that the inventory is replenished more often and in smaller quantities, which reduces the risk of stockouts and the need for safety stock. Frequent replenishments also improve the inventory visibility and accuracy, which enable better demand forecasting and inventory planning. By reducing the safety stock, the company can lower its inventory carrying costs, free up working capital, and increase its inventory turnover. The other options are not correct, as they are not the primary outcome of frequent replenishments, but rather possible benefits or drawbacks of frequent replenishments, depending on the situation:

Lead times to customers decrease: This may or may not be true, depending on the distance between the distribution centers and the customers, the transportation mode and frequency, and the customer service level. Frequent replenishments may reduce the lead times if the distribution centers are closer to the customers and the transportation is fast and reliable. However, frequent replenishments may also increase the lead times if the distribution centers are far from the customers and the transportation is slow and infrequent.

Transportation costs decrease: This may or may not be true, depending on the transportation mode, distance, and volume. Frequent replenishments may reduce the transportation costs if the transportation mode is economical, the distance is short, and the volume is high. However, frequent replenishments may also increase the transportation costs if the transportation mode is expensive, the distance is long, and the volume is low.

More efficient load consolidation occurs: This is unlikely to be true, as frequent replenishments usually mean smaller shipments that are less likely to fill the capacity of the transportation

vehicles. Load consolidation is the process of combining multiple shipments into one larger shipment to optimize the transportation efficiency and reduce the transportation costs. Frequent replenishments may reduce the opportunities for load consolidation and increase the transportation inefficiency and costs. References:

[CPIM Part 2 - Section A - Topic 4 - Distribution Planning]

Distribution Requirements Planning (DRP) in Supply Chain

What is DRP? (A Comprehensive Guide on Distribution Requirements Planning) Safety Stock:

The Ultimate Guide Load Consolidation

NEW QUESTION: 63

The production plan defines which of the following targets?

- A. Sales forecast
- B. Quantities of each product to be produced
- C. Level of output to be produced
- D. Business plans for the company

Answer: C ([LEAVE A REPLY](#))

The production plan is a high-level plan that defines the level of output to be produced for each product family or group in a given time period. It is based on the sales forecast, the aggregate production capacity, and the desired inventory levels. The production plan does not specify the quantities of each individual product to be produced, as this is done in the master production schedule. The production plan also does not include the sales forecast or the business plans for the company, as these are inputs to the production plan, not outputs¹² References:

Introduction to Materials Management, 8th ed., 2017, Chapman, Stephen N., J. R. Tony Arnold, Ann K.

Gatewood, and Lloyd M. Clive, ISBN: 978-0134156323, Chapter 11: Production Planning System Manufacturing Planning and Control for Supply Chain Management, The CPIM Reference, 2nd ed.,

2018, Jacobs, F. Robert, William L. Berry, D. Clay Whybark, and Thomas E. Vollmann, ISBN: 978-1260108385, Chapter 6: Production Planning Strategies

NEW QUESTION: 64

We have observed the inventory system does not handle plastic parts well." What should be added to the problem statement to make it more useful?

- A. Measurements that help describe the problem
- B. Guidance to which problem-solving tools should be used
- C. Criteria for selecting the improvement team
- D. Description of who is responsible for the problem

Answer: ([SHOW ANSWER](#))

A problem statement is a concise description of an issue to be addressed or a condition to be improved upon. It identifies the gap between the current state and the desired state of a process or a system. A good problem statement should include measurements that help describe the

problem, such as the magnitude, frequency, location, and impact of the problem. These measurements can help quantify the problem and provide a baseline for improvement. The other options are not essential for a problem statement, but rather for the subsequent steps of problem-solving, such as selecting tools, forming teams, and assigning responsibilities.

References:

*[CPIM Part 2 - Section B - Topic 1 - Quality and Continuous Improvement]

*How to Write a Problem Statement

NEW QUESTION: 65

Which of the following environments is most suitable for the use of kanban systems?

- A. Short product life cycles
- B. High levels of customization
- C. Intermittent production
- D. Stable and predictable demand

Answer: D (LEAVE A REPLY)

Kanban is a pull system that uses visual signals to trigger the replenishment of materials or parts. It works best in environments where the demand is stable and predictable, and the production process is continuous and standardized. Kanban helps to reduce inventory, waste, and lead time by synchronizing the production and consumption rates. Kanban is not suitable for environments where the demand is volatile, the product life cycle is short, the production process is intermittent, or the product is highly customized. These factors would require frequent changes in the kanban system and reduce its effectiveness. References:

*CPIM Part 1 Study Guide, Chapter 4: Demand Management, Section 4.3: Pull Systems and Kanban

*CPIM Part 2 Study Guide, Chapter 1: Execution of Operations, Section 1.4: Lean Production and JIT

*What Is the Kanban System? - Investopedia

*Kanban - What Is it? | Lean Enterprise Institute

NEW QUESTION: 66

A part is sold as a service part, and It is also used as a component In another part. Which of the following statements about the planning for this part is true?

- A. Its low-level code is zero.
- B. The material requirements for the part will be understated.
- C. The service part demand can be included In the gross requirements.
- D. It shouldn't have any safety stock.

Answer: C (LEAVE A REPLY)

The service part demand can be included in the gross requirements for the part. Gross requirements are the total demand for an item derived from all sources, such as customer orders, dependent demand, forecast, or safety stock. Service part demand is the demand for an item that is used to replace or repair a product after it has been sold to the customer. Service part demand

is independent of the production of other items, and it can be forecasted based on historical data, warranty information, or customer contracts. Service part demand can be added to the gross requirements for the part, along with the dependent demand from the other part that uses it as a component.

Option A is not correct, because the low-level code of the part is not zero. Low-level code is the lowest level in the bill of material (BOM) at which an item appears as a component. An item that is not a component of any other item has a low-level code of zero. An item that is a component of another item has a low-level code equal to one plus the low-level code of the parent item. In this case, the part is a component of another part, so its low-level code is at least one.

Option B is not correct, because the material requirements for the part will not be understated. Material requirements are the net requirements for an item after deducting the available inventory and scheduled receipts from the gross requirements. If the service part demand is included in the gross requirements, the material requirements will reflect the true demand for the part. If the service part demand is not included, the material requirements will be understated, and the part may face stockouts or backorders.

Option D is not correct, because the part should have some safety stock. Safety stock is the extra inventory held to protect against uncertainties in demand, supply, or lead time. Safety stock can help reduce the risk of stockouts, improve customer service, and buffer against variability. The part should have some safety stock to account for the fluctuations in the service part demand, which may depend on factors such as product failure rate, customer behavior, or environmental conditions.

NEW QUESTION: 67

Which of the following production activity control (PAC) techniques focuses on optimizing output?

- A.** Gantt chart
- B.** Priority sequencing rules
- C.** Theory of constraints (TOC) scheduling
- D.** Critical path management (CPM)

Answer: ([SHOW ANSWER](#))

Theory of constraints (TOC) scheduling is a PAC technique that focuses on optimizing output by identifying and managing the bottleneck or the constraint in the production system. TOC scheduling aims to maximize the throughput of the constraint while minimizing the inventory and operating expenses. Gantt chart, priority sequencing rules, and critical path management (CPM) are other PAC techniques, but they do not specifically focus on optimizing output. Gantt chart is a graphical tool that shows the planned and actual start and finish dates of activities. Priority sequencing rules are methods of determining the order of processing jobs based on criteria such as due date, slack time, or processing time. CPM is a network analysis technique that identifies the longest path of activities in a project and the minimum time required to complete it.

References:

APICS CPIM Part 2 Exam Content Manual, p. 29

[APICS CPIM Learning System Version 8.0], Module 4, Section C, p. 4-25

NEW QUESTION: 68

Which of the following criteria is used to determine safety stock in a distribution center (DC)?

- A. Economic order quantity(EOQ)
- B. Seasonal index value
- C. Probability of stocking out
- D. Alpha factor level

Answer: C ([LEAVE A REPLY](#))

The probability of stocking out is the likelihood that the demand for an item will exceed the available inventory during a given period. It is one of the criteria used to determine safety stock in a distribution center (DC), as safety stock is inventory that is carried to protect against forecast errors and fluctuations in demand or supply. The higher the probability of stocking out, the more safety stock is needed to avoid customer dissatisfaction and lost sales. The other criteria are not directly related to safety stock. Economic order quantity (EOQ) is the order quantity that minimizes the total inventory holding and ordering costs. Seasonal index value is a measure of how demand varies according to different seasons or periods. Alpha factor level is a parameter used in exponential smoothing to adjust the forecast based on the error between the actual and forecasted demand. References: Safety Stock: A Contingency Plan to Keep Supply Chains Flying High, APICS CPIM 8 Planning and Inventory Management | ASCM

NEW QUESTION: 69

A company confirms a customer order based on available capacity and inventory, even though the current production plan does not cover the entire order quantity. This situation is an example of what type of order fulfillment policy?

- A. Assemble-to-order (ATO)
- B. Capable-to-promise (CTP)
- C. Available-to-promise (ATP)
- D. Configure-to-order (CTO)

Answer: B ([LEAVE A REPLY](#))

Capable-to-promise (CTP) is a type of order fulfillment policy that confirms a customer order based on the available capacity and inventory, as well as the current production plan and schedule. CTP calculates the earliest possible delivery date for a customer order, considering the existing demand and supply situation. CTP allows a company to accept an order that exceeds the current available inventory, as long as it can produce the remaining quantity within the customer's requested delivery time. CTP helps to improve customer service, reduce inventory costs, and increase production efficiency¹². References: 1 Capable to Promise (CTP) - Definition, Calculation, and Examples 3 2 CPIM Exam References - Association for Supply Chain Management

NEW QUESTION: 70

When designing a production cell, which of the following items would be the most important consideration?

- A. The unit per hour requirement for the production cell to meet the sales forecast
- B. The flow of materials into the cell and sequencing of operations to minimize total cycle time
- C. The output rate for the first operation and move time after the last workstation
- D. The takt time requirement for each operator to meet the monthly production goals of the plant

Answer: ([SHOW ANSWER](#))

A production cell is a group of machines or workstations that are arranged in a way that allows for continuous flow of materials and products. The main objective of designing a production cell is to reduce waste, improve quality, and increase productivity. One of the most important considerations for designing a production cell is the flow of materials into the cell and sequencing of operations to minimize total cycle time. Total cycle time is the time it takes for a product to go through all the steps in the cell, from the first operation to the last. By minimizing total cycle time, the production cell can achieve higher throughput, lower inventory, and faster delivery¹²³

References: 1: CPIM Part 2 - Section C - Module 1 - Session 1 - Lean Manufacturing 2: CPIM Part 2 - Section C - Module 1 - Session 2 - Lean Manufacturing Tools 3: CPIM Part 2 - Section C - Module 1 - Session 3 - Lean Manufacturing Implementation

NEW QUESTION: 71

Which of the following measurements indicates there may be bias in the forecast model?

- A. Mean absolute deviation (MAD)
- B. Standard deviation
- C. Tracking signal
- D. Variance

Answer: C ([LEAVE A REPLY](#))

The tracking signal is a measurement that indicates there may be bias in the forecast model. The tracking signal is the ratio of the cumulative forecast error to the mean absolute deviation (MAD). It measures how well the forecast is tracking the actual demand over time. A tracking signal of zero means that the forecast is perfectly accurate. A tracking signal within the range of -4 to +4 is considered acceptable. A tracking signal outside this range indicates that the forecast is consistently overestimating or underestimating the demand, which implies that there is bias in the forecast model. Bias is the tendency of a forecast to be consistently higher or lower than the actual demand. Bias can be caused by factors such as inaccurate data, inappropriate forecasting methods, or changes in demand patterns. References:

Managing Supply Chain Operations, Chapter 5: Demand Management and Forecasting, Section 5.2:

Forecasting Methods, Subsection 5.2.3: Forecast Accuracy and Control

CPIM Exam Content Manual, Module 3: Demand, Section 3.2: Forecasting, Subsection 3.2.2:

Forecasting Methods, Subsubsection 3.2.2.3: Forecast Accuracy and Control

NEW QUESTION: 72

Which of the following methods places a replenishment order when the quantity on hand falls below a predetermined level?

- A. Min-max system
- B. Fixed order quantity
- C. Periodic review
- D. Available-to-promise (ATP)

Answer: B (LEAVE A REPLY)

Fixed order quantity is a method that places a replenishment order when the quantity on hand falls below a predetermined level, called the reorder point. The reorder point is calculated based on the expected demand during the lead time and the safety stock. The order quantity is fixed and constant, and it is determined by the economic order quantity (EOQ) formula or other criteria. Fixed order quantity is also known as the order point/order quantity (OP/OQ) system or the continuous review system.

Option A is not correct, because min-max system is a method that places a replenishment order when the quantity on hand falls below a minimum level, called the order point. The order quantity is variable and depends on the difference between the maximum level and the current inventory level. Min-max system is also known as the two-bin system or the bin system.

Option C is not correct, because periodic review is a method that places a replenishment order at fixed intervals of time, regardless of the quantity on hand. The order quantity is variable and depends on the difference between the target inventory level and the current inventory level. Periodic review is also known as the fixed order interval (FOI) system or the periodic order quantity (POQ) system.

Option D is not correct, because available-to-promise (ATP) is not a method of inventory replenishment, but a calculation of the uncommitted portion of the current inventory and planned production. ATP is used to promise delivery dates to customers based on the availability of inventory and production capacity.

References:

Inventory Management and Control

Inventory Replenishment Methods

Inventory Replenishment Policies

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